



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0290; Directorate Identifier 2012-NM-210-AD]

RIN 2120-AA64

Airworthiness Directives; Lockheed Martin Corporation/Lockheed Martin

Aeronautics Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Lockheed Martin Corporation/Lockheed Martin Aeronautics Company Model L-1011 series airplanes. This proposed AD was prompted by reports of cracked rib cap castellations. This proposed AD would require repetitive inspections for castellation and skin clips cracked or damaged between stringers and cracked stringer clips of the wing box pylon back-up structure, and front spar to rear spar, repetitive inspections for cracking, damage, or failure of the pylon back-up torque box structure; repetitive inspections for cracking or damage of the wing box external areas at the drag brace aft wing fitting; and repetitive inspections of the outer surface of the wing upper and lower skins for cracks or damage along the rib attachment at the fastener holes and between the two rows of attachment; and corrective actions if necessary. We are proposing this AD to detect and correct cracked or damaged rib cap castellations, which could degrade the structural capabilities of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Lockheed Martin Corporation/Lockheed Martin Aeronautics Company, L1011 Technical Support Center, Dept. 6A4M, Zone 0579, 86 South Cobb Drive, Marietta, GA 30063-0579; telephone 770-494-5444; fax 770-494-5445; email L1011.support@lmco.com; Internet <http://www.lockheedmartin.com/ams/tools/TechPubs.html>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0290; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Carl Gray, Aerospace Engineer,
Airframe Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office (ACO), 1701
Columbia Avenue, College Park, Georgia 30337; phone: 404-474-5554;
fax: 404-474-5605; email: carl.w.gray@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0290; Directorate Identifier 2012-NM-210-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received multiple reports of cracked rib cap castellations on Model L-1011-385-1 airplanes. The predominance of cracked castellations have been found on the upper cap at inboard wing station (IWS) 555.0. Cracked castellations were also found on the lower cap at IWS 555.0, and at a few locations on the upper caps at IWS 529.4 and 503.76. Castellation cracks may propagate into the rib cap proper, and with several castellations cracked and the rib cap severed, fail safe capability cannot be analytically proven. Continued operation in this condition can result in severe additional damage and

loss of stiffness in the pylon back-up structure creating a potential flutter hazard. This condition, if not corrected, could result in degraded structural capabilities of the airplane.

Relevant Service Information

We reviewed Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008. This service bulletin describes procedures for:

- A repetitive detailed inspection of the wing box pylon back-up structure, front spar to rear spar, for castellation and/or skin clips cracked or damaged between stringers and cracked stringer clips.
- A repetitive general visual inspection for cracking or damage of the pylon back-up torque box structure.
- A repetitive general visual inspection for cracking, damage, or failure of the wing box external areas at the drag brace aft wing fitting.
- A repetitive general visual inspection for cracking or damage of the outer surface of the wing upper and lower skins for cracks or damage along the rib attachment at the fastener holes and between the two rows of attachments.

Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008, describes corrective actions as replacing cracked clips with a new clip, and stop drilling a single cracked castellation with a crack that is no longer than three quarters of an inch, provided the two adjacent castellations on either side are crack free (i.e., every third castellation may be cracked and stop drilled). Additionally, this service bulletin specifies that if more than two consecutive castellations are cracked, the airplane should be modified by installing new rib caps or the cracked castellations repaired by replacing a segment of the rib cap using cap splices. This service bulletin states that all other damaged structural items should be repaired in accordance with the best shop practices, following procedures in Structural Repair Manual 57-12-00 and to advise Lockheed of all such repairs.

Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008, describes a compliance time of before the accumulation of 15,000 total flight cycles or 27,000 total flight hours, whichever occurs first. The repetitive inspection interval is described as not to exceed 3,600 flight cycles or 7,200 flight hours, whichever occurs first.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between the Proposed AD and the Service Information." This proposed AD also requires sending a report of crack findings during any inspection required by this AD to the Manager, Atlanta Aircraft Certification Office.

Differences Between the Proposed AD and the Service Information

Although Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008, specifies that operators may contact the manufacturer for disposition of certain repair conditions, this proposed AD would require operators to repair those conditions in accordance with a method approved by the FAA.

Related AD

This proposed AD is related to AD 94-05-01, Amendment 39-8839 (59 FR 10275, March 4, 1994). For Model L-1011-385 series airplanes, serial numbers 1002 through 1188, paragraph (c) of AD 94-05-01 specifies that doing the modification specified in Lockheed Service Bulletin 093-57-207, Revision 3, dated November 22, 1991, constitutes terminating action for the repetitive inspection requirements of that service

bulletin. We have determined that the modification no longer constitutes terminating action for the repetitive inspections, and this proposed AD would require repetitive inspections.

Costs of Compliance

We estimate that this proposed AD affects 26 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections	41 work-hours X \$85 per hour = \$3,485 per inspection cycle	\$0	\$3,485 per inspection cycle	\$90,610 per inspection cycle

We estimate the following costs to do any necessary repairs that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these repairs:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Modification (Up to 12 rib caps per airplane)	96 work-hours X \$85 per hour = \$8,160 per rib cap	\$15,000 per rib cap	\$23,160 per rib cap

Other than the modification stated above, we have received no definitive data that would enable us to provide cost estimates for the crack repair actions specified in this proposed AD.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that

collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave., SW, Washington, DC 20591. ATTN: Information Collection Clearance Officer, AES-200.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,

or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Lockheed Martin Corporation/Lockheed Martin Aeronautics Company: Docket No. FAA-2014-0290; Directorate Identifier 2012-NM-210-AD.

(a) Comments Due Date

We must receive comments by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Lockheed Martin Corporation/Lockheed Martin Aeronautics Company Model L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3 airplanes, certificated in any category, as identified in Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by reports of cracked rib cap castellations. We are issuing this AD to detect and correct cracked or damaged rib cap castellations, which could degrade the structural capabilities of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Wing Inspections

For Model L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3 airplanes, serial numbers 1189 and subsequent: At the applicable compliance time specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, do the inspections specified in paragraphs (g)(1) through (g)(4) of this AD. Repeat the inspections thereafter at intervals not to exceed 3,600 flight cycles or 7,200 flight hours, whichever occurs first.

(1) Do a detailed inspection for castellation and skin clips cracked or damaged (including cracks, loose or missing fasteners, oversized and missed drilled fastener holes, corrosion, dents, scratches and other signs of distress) between stringers and cracked stringer clips of the wing box pylon back-up structure, and front spar to rear spar, in

accordance with the Accomplishment Instructions of Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008.

(2) Do a general visual inspection for cracking or damage (including cracks, loose or missing fasteners, oversized and missed drilled fastener holes, corrosion, dents, scratches and other signs of distress) of the pylon back-up torque box structure, in accordance with the Accomplishment Instructions of Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008.

(3) Do a general visual inspection for cracking, damage (including cracks, loose or missing fasteners, oversized and missed drilled fastener holes, corrosion, dents, scratches and other signs of distress), or failure of the wing box external areas at the drag brace aft wing fitting, in accordance with the Accomplishment Instructions of Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008.

(4) Do a general visual inspection for cracking or damage (including cracks, loose or missing fasteners, oversized and missed drilled fastener holes, corrosion, dents, scratches and other signs of distress) of the outer surface of the wing upper and lower skins for cracks along the rib attachment at the fastener holes and between the two rows of attachments, in accordance with the Accomplishment Instructions of Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008.

(h) Compliance Times for Paragraph (g) of This AD

(1) For airplanes that have not accomplished the inspections described in Lockheed Service Bulletin 093-57-207 prior to the effective date of this AD: at the later of the compliance times specified in paragraphs (h)(1)(i) and (h)(1)(ii) of this AD.

(i) Before the accumulation of 15,000 total flight cycles or 27,000 total flight hours, whichever occurs first.

(ii) Within 1,800 flight cycles or 3,600 flight hours, whichever occurs first, after the effective date of this AD.

(2) For airplanes that have accomplished the inspections described in Lockheed Service Bulletin 093-57-207 prior to the effective date of this AD: Within 3,600 flight cycles or 7,200 flight hours, whichever occurs first, after the completion of the most recent inspections, except as specified in paragraph (h)(3) of this AD.

(3) For rib caps that have been modified as described in Lockheed Service Bulletin 093-57-207: Before the accumulation of 15,000 total flight cycles or 27,000 total flight hours, whichever occurs first, for that rib cap only.

(i) Corrective Action

If any cracking, damage, or failure is found during any inspection required by paragraph (g) of this AD: Before further flight, do all applicable corrective actions, in accordance with the Accomplishment Instructions of Lockheed Service Bulletin 093-57-207, Revision 5, dated November 14, 2008, except where this service bulletin specifies that all other damaged structural items should be repaired in accordance with the best shop practices, following procedures in Structural Repair Manual 57-12-00, this AD requires repairing the damage before further flight, in accordance with a method approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. For a repair method to be approved by the Manager, Atlanta ACO, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(j) Reporting

Submit a report of positive findings of the inspection for cracking required by this AD to the Manager, Atlanta ACO, at the applicable time specified in paragraph (j)(1) or (j)(2) of this AD. The report must include the inspection results, a description of the discrepancies found, the airplane serial number, and the number of landings and flight hours on the airplane.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(k) Paperwork Reduction Act Burden Statement

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(l) Credit for Previous Actions

This paragraph provides credit for actions required by paragraphs (g) and (i) of this AD, if those actions were performed before the effective date of this AD using Lockheed Service Bulletin 093-57-207, Revision 3, dated November 22, 1991.

(m) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (n)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(n) Related Information

(1) For more information about this AD, contact Carl Gray, Aerospace Engineer, Airframe Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office (ACO), 1701 Columbia Avenue, College Park, Georgia 30337; phone: 404-474-5554; fax: 404-474-5605; email: carl.w.gray@faa.gov.

(2) For service information identified in this AD, contact Lockheed Martin Corporation/Lockheed Martin Aeronautics Company, L1011 Technical Support Center, Dept. 6A4M, Zone 0579, 86 South Cobb Drive, Marietta, GA 30063-0579; telephone 770-494-5444; fax 770-494-5445; email L1011.support@lmco.com; Internet <http://www.lockheedmartin.com/ams/tools/TechPubs.html>. You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on May 15, 2014.

Michael Kaszycki,
*Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.*

BILLING CODE 4910-13-P

